The Influence of Inclusive School Policy and GSAs on Long-Term Well-Being for LGBT Students in Texas

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Table of Contents

Abstract

Lesbian, gay, bisexual, and transgender (i.e., LGBT) youth are at risk for lower educational attainment than their heterosexual and cisgender peers. Prior research indicates that inclusive anti-discrimination policies and gender sexual alliances (ie., GSAs) can improve school outcomes for LGBT and all youth, yet few studies have examined these strategies with respect to long term educational attainment such as graduation rate, college readiness, and higher education enrollment. Using data from the Texas Education Agency (TEA), I conducted nested regression analyses to examine the influence of inclusive enumerated anti-discrimination policies and GSAs on long-term educational attainment indicators in the 20 largest public school districts of Texas. Results suggest that across school districts, 42.03% of schools had GSAs and 56.04% had inclusive policies. Further, students in schools with GSAs were significantly more likely to be deemed college-ready or college, career, or military-ready by the TEA. Neither enumerated policies nor GSAs were significantly associated with overall four-year graduation rate, dropout rates, and enrollment in Texas higher education in the current study. Our findings indicate that GSAs may be a successful proximate strategy in supporting inclusive campus culture that can translate to long-term positive outcomes. District-level inclusive policies may not be enough to influence student educational outcomes, but further research is necessary to understand the impacts of policy and other protective strategies.

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Introduction

LGBT Students in School

Lesbian, gay, bisexual, and transgender (LGBT) youth are at greater risk for health issues such as substance abuse and depression than their heterosexual peers (Hafeez, Zeshan, Tahir, Jahan & Naveed, 2017). LGBT youth are focused on for the scope of this review and study, as researchers often identify LGBT students, and groups of diverse sexual orientation and gender identity, as vulnerable groups for inclusive policies and practices (GLSEN, 2017). LGBT people experience compromised health outcomes and are more likely to receive poor quality of care due to stigma and lack of awareness, which translate to greater disparities for diseases such as cancers and cardiovascular disease (Hafeez et al., 2017). LGBT youth are therefore particularly at risk for health and educational disparities that may have long-lasting consequences. Since adolescence is the period during which patterns are established for later life, this period is critical to understand vulnerability in LGBT people.

Adolescents spend a significant time of their week in school. Therefore, experiences at school influence developmental aspects including health, social capital, and psychological well-being. Negative experiences at school can translate to risky behavior and can cause students to seek sources of escape off campus (Jamal, Fletcher, Harden, Wells, Thomas & Bonell, 2013). Targeting these negative experiences can keep students in school and be critical to target health inequalities that emerge from these risky behaviors (Jamal et al., 2013). It is important to understand how negative experiences at school can impact LGBT students to better identify strategies to ameliorate any negative effects.

Nearly three out of five (59.5%) LGBT students reported feeling unsafe at school because of their sexual orientation, while 44.6% reported feeling unsafe because of their gender

expression. More than 70% of LGBT students reported avoiding school functions and extracurricular activities because they felt unsafe. Most LGBT students feel unsafe at an environment they spend most of their adolescence developing in. The research supports an LGB youth experience in schools that reflect higher rates of discrimination, harassment, and victimization than their heterosexual peers (Friedman, Marshal, Guadamuz, Wei, Wong, Saewyc, & Stall, 2011; Katz-Wise & Hyde, 2012; Toomy & Russell, 2013). Further, a recent study by GLSEN suggests that progress on safe schools has actually slowed (GLSEN, 2017). There is a lack of research to analyze how these patterns affect disparities in graduation rates and educational attainment, but there is evidence to suggest that sexual orientation and gender identity (SOGI) minority groups experience educational disparities in high school completion, college enrollment, and college completion in the United States (Mollborn & Everett, 2015).

SOGI-Inclusive Nondiscrimination Policies, GSAs, and the Texas Context

SOGI-inclusive non-discrimination policies are policies instituted by schools that specifically enumerate sexual orientation and gender identity as protected groups (Russell, Kosciw, Horn & Saewyc, 2010). These inclusive policies can protect groups from discrimination and bullying, as well as allow the formation of student organizations such as GSAs that primarily support LGBT students (Russell, et al., 2010). However, Texas youth may not be protected by SOGI-inclusive non-discrimination policies nor GSAs, as the state of politics and school policies in Texas reflects a larger stigma and lack of knowledge on supporting LGBT youth.

Texas falls behind the rest of the nation in state-wide SOGI-inclusive policies with no state-wide protections for discrimination against LGBT students (Movement Advancement Project, 2020). Schools are not mandated to explicitly enumerate protections for their LGBT students, despite growing evidence that enumerated, inclusive policies are associated with a safer

school climate (Black, Fedewa & Gonzalez 2012; Russell, et al., 2010). In schools that are judged least safe by teachers, reports of bullying have been found to be lower in the presence of more SOGI-focused policies, which translate to better outcomes for all students, not just vulnerable students (Russell, Day, Ioverno & Toomey, 2016). SOGI-focused and inclusive policies have included enumerated school nondiscrimination and anti-bullying policies that indicate to students and teachers a safer school climate dedicated to all students' safety.

The National School Climate Center defines school climate as the quality and character of school life, with many contributing factors including safety climate, relationship climate, and learning climate. The NSCC recommends that schools assess their rules, norms, and sense of physical security to indicate a safe school climate, which may include district policies. Since education is one of the most important modifiable social determinants of health, it is worth investing in a safer and more supportive environment for vulnerable students (McGill, 2016). The experiences at educational institutions inform a student's well-being as much as the education itself. Safe schools are critical for promoting health, social capital, and psychological well-being for LGBT youth as a safe environment firstly fosters retention and achievement.

While policies can be one way to support a safe school environment, the implementation of these policies can create supportive campus enclaves in the form of GSAs. Schools with GSAs are less likely to have incidents of discrimination, harassment, and victimization of LGBT students (Goodenow, Szalacha, & Westheimer, 2006). Additionally, a study on California schools has suggested that schools with GSAs are more likely to have fewer socioeconomically disadvantaged students and higher academic achievement (Baams, Pollitt, Laub & Russell, 2018). However, the presence of GSAs has not been comprehensively studied in Texas public

schools, thus there is a distinct opportunity to understand the role of GSAs in a state that has not been as traditionally open with LGBT-affirming spaces.

The Texas Education system is one of the largest in the country with more youth in public school than 28 states have residents, according to the Texas Tribune, with 5.1 million students (National Center for Education Statistics, 2018). Including 202 charter schools, Texas has 1,227 school districts (National Center for Education Statistics, 2018). Thus, the Texas Education system is important to study, with unique politics positioning GSAs and policy as potentially capable of having a large impact on the traditional school environment. The Texas Education Agency tracks school and district performance through annual Academic Performance Reports, which reflect graduation rates and post-secondary attainment among other variables. Texas does not track educational outcomes for sexual minority groups, and LGBT students are also underrepresented in national surveys and studies.

Summary

In my study, I aim to address the impact of SOGI-inclusive nondiscrimination policies and GSAs on the long-term well-being of LGBT students. I first review the literature on the school context, inclusive policies, and GSAs. I then describe my research question, methods, and analysis plan. I present results and explore their significance.

Literature Review

School Climate and Post-Secondary Education

A growing body of research supports the relationship between a supportive school climate and better outcomes for all students, as a positive school environment is associated with better social, emotional, and even physical health (McNeely, Nonnemaker, & Blum, 2009). In

order to build on prior research analyzing the impact of SOGI-inclusive policies and practices, this study aims to explore this impact through educational attainment indicators. A positive campus environment translates to positive outcomes for not only LGBT students, but also all students (Poteat & Espelage, 2005; Poteat & Rivers, 2010). The impact of inclusive policies and practices on educational attainment may thus be demonstrated at the entire campus-level, which is significant because of the predominant role that schools play in all adolescent development. Identifying and utilizing strategies that promote a positive school environment may facilitate long-lasting change through supporting educational attainment.

School climate is important to keep LGBT students in school and potentially consider post-secondary education. LGBT students are twice as likely to report that they don't plan to pursue any post-secondary education (Aragon, Poteat, Espelage, & Koenig, 2017). There is strong evidence to suggest that LGBT students experience lower educational outcomes because of higher levels of victimization, discrimination, and homophobic bullying (Kosciw, Palmer, Kull & Greytak, 2013). However, a positive school climate and less homophobic victimization have been found to moderate existing disparities in outcomes like depression, suicidality, drug use, and difficulties in school (Birkett, Espelage & Koenig, 2009).

A student who graduates high school and attends college is more likely to be better off financially, emotionally, and physically later in life (Lawrence, 2017). The Bureau of Labor Statistics reported that high school graduates earn over $10K more per year than those who drop out, and it is estimated that 65% of all jobs in 2020 will require some form of education after high school (Bureau of Labor Statistics, 2019). Graduation and dropout rates therefore can indicate income mobility and long-term outcomes at an individual level. Beyond economic

mobility, college degree attainment has also been found to have a causal influence on improving health behaviors (Lawrence, 2017).

Inclusive Non-Discrimination Policies

Enumerated policies list characteristics or traits of vulnerable students, such as sexual and gender minority groups, and call for protection for all students from bullying and discrimination, with specific steps to ensure safety (Bishop, Ioverno & Russell, 2019). Inclusive policies can be specific to anti-bullying and anti-discrimination of certain protected groups (Bishop et al., 2019). The enumeration of these protections and of protected groups can demonstrate to students, teachers, and administrators the district's overall attitude towards this kind of behavior, as well as provide tangible steps for enforcement, which is more likely to create a safer environment (Swanson & Gettinger, 2016). Without enumeration of SOGI as a protected group, anti-discrimination policies may not have its desired efficacy (GLSEN, 2017). While most schools nationally have some form of bullying or harassment policy, not many have been shown to be comprehensive in nature through the enumeration of protected groups (ibid). Inclusive policies that specifically address SOGI groups have been found to have a direct association with less truancy and more positive perceptions of school climate for LGBT youth, which translates to better outcomes (Day, Ioverno, & Russell, 2019).

According to social-ecological theory, health is shaped by interactions within the classroom and school, which are thereby influenced by district-wide policies that reflect local political and cultural norms (Eccles & Roeser, 2011). It is therefore not only the presence, but the implementation, of these policies through a realized safer school climate that can demonstrate how much a district is dedicated to inclusivity and safe environment enforcement. Teachers at schools with comprehensive polices report lower levels of anti-LGBT language (GLSEN, 2020).

Research links inclusive and enumerated policies with a safer school climate and better outcomes for all students, including social, emotional, and physical health (Black et al., 2012; McNeely et al., 2009). Beyond retaining LGBT youth and promoting better outcomes, a growing body of evidence suggests these positive policy-supported environments translate to longer-term positive mental health, educational, and occupational outcomes for LGBT youth who engaged in academics (Watson & Russell, 2014). The safe environments promoted by inclusive policy therefore has potential for outcomes beyond school itself.

Inclusive and comprehensive policies have been postulated to retain LGBT youth in school by institutionalizing support for LGBT youth who experience discrimination and harassment. The enforcement of such policies improves school climate by formalizing intervention, as well as reinforcing a message of LGBT support and increasing teacher and administrator awareness (Kosciw et al., 2013). LGBT students in schools with comprehensive policies were much more likely to say that staff intervene in homophobic and gender expression-phobic remarks than schools with partially enumerated or nonexistent policies (Kosciw et al., 2013). These SOGI-inclusive protections have been found to have effects on the overall student population, translating to better outcomes for all students (Russell et al., 2016). Additionally, LGBT students were more likely to seek help in the first place through reporting the incident and then find the intervention was effective in schools with inclusive policies (GLSEN, 2017). Finally, inclusive policies can be utilized as distal strategies to provide the basis for and protection of organizations such as GSAs at the campus level, which can have a proximate impact on LGBT students.

Gender Sexuality Alliances (GSAs)

Youth spend a disproportionate amount of time in schools, and schools are often institutions that reinforce and replicate societal inequities and norms (Bourdieu & Passeron, 1977). Outside of the classroom, student organizations can shape school climate and address inequities (Poteat, Yoshikawa, Calzo, Russell, & Horn, 2017). Student organizations designed to support and affirm diverse SOGI identities, otherwise termed gender sexuality alliances, began in the mid-1990s (GLSEN, 2017). Since their origin, these clubs, often called Gay-Straight Alliances, Peers for Pride, or Gender-Sexuality Alliances among other names, saw substantial increases in membership (GLSEN, 2017). GSAs can improve the quality of life for LGBT students by disrupting traditional hetero- and cis-normative culture. GSAs can also promote inclusion for all students through direct support, education, and advocacy (Poteat et al., 2017).

Research has found that LGBT youth that have access to a school GSA experience less in-school victimization, discrimination, and harassment (Goodenow et al., 2006; Heck, Flentje, & Cochran, 2011). This translates to immediate positive school outcomes, such as higher attendance rates (Goodenow et al., 2006) and higher levels of communication with educators (GLSEN, 2017). The association between high attendance rates and schools with GSAs has been replicated in recent research on schools in Texas as well (McEntee, 2019).

These positive student educational outcomes suggest the potential for long-lasting achievement. For instance, LGBT youth that attended schools with a GSA have been found to be more likely to report positive school and mental health experiences (Heck et al., 2011). Additionally, LGBT students who had access to GSAs report less depression, higher self-esteem, and higher educational attainment after high school (Toomey, Ryan, Diaz, & Russell, 2011). However, to date, studies have not examined these longer term indicators of well-being.

The research suggests an important link between GSAs and positive educational experiences for LGBT students. This may be through creating a positive and affirming space for LGBT individuals in a school environment that may be otherwise hostile. Additionally, they can stimulate a larger awareness of LGBT identities and issues in the school through awareness campaigns and their organizational activities (Toomey et al., 2011). Even when LGBT students do not actively participate in GSAs, they are found to benefit from the GSA's impact on the school through the perceived level of awareness and support from teachers and peer students (Toomey et al., 2011). The presence of a GSA could therefore serve as an indicator of a school environment dedicated to proximately supporting LGBT students. However, this is not always the case. Although students have the right to form and participate in GSAs, as protected by the Equal Access Act of 1984, many schools and administrations even today are against their formation or do not specifically protect them in their policies, which can lead to a complex student environment (Toomey et al., 2011). Therefore, conservative states like Texas are noteworthy for examining the relationship between GSAs and their impact on students in school.

Purpose of the Current Study

Research Question

The goal of the current study is to fill the extant gaps in research regarding SOGI safe school policies and students' long term educational attainment. To do so, this study will address the following research question: Is the presence of inclusive enumerated policies and GSAs in Texas school districts associated with school graduation rates, dropout rates, and student educational attainment indicators?

Given prior research supporting the protective effect of GSAs, I predict that GSAs will also have a positive association with educational attainment indicators such as graduation rate, college-readiness score, and Texas higher education enrollment. While the connection between enumerated policies and a more positive school environment is not as comprehensively supported, I predict that inclusive non-discrimination district policies will be positively associated with these indicators as well, and perhaps amplified by the presence of a GSA.

This current study adds to the literature by looking at inclusive policies and GSAs through the social-ecological model that emphasizes how schools influence long-term well-being. This long-term well-being is measured in my study through looking at educational attainment at and beyond public high school in Texas, which has yet to be examined. By providing a view of the state of inclusive policy and GSAs in Texas, public schools in Texas and around the nation may be motivated to create more comprehensive and tangible policies and practices at the district and campus level to combat discrimination against LGBT students, translating to better outcomes.

Methods and Measures

Data

Data for the current study come from the Texas Education Agency (TEA) annual Academic Performance Report from the 2018-2019 academic year (Texas Education Agency, 2019). The Academic Performance Report reports on multiple school-level outcomes indicating campus and district success. The analytic sample for the current study focused on public high schools in the 20 largest school districts in Texas, as defined by district population. Although 207 schools comprised the top 20 school districts of Texas, the final analytic sample was 193 schools, as some schools did not report all the necessary outcome variables. The schools represented diverse areas of Texas and contained about one-third of students in Texas public schools in the grades of 9 through 12 (McEntee, 2019).

Measures

SOGI-Inclusive Discrimination Policy. A school district's policy was coded as inclusive if the policy specifically enumerated "sexual orientation" and "gender identity" as protected groups in their anti-discrimination policy, which was found through their website (0=not present, 1=present). "Sexual orientation" and "gender identity" were the specific terms utilized to determine inclusivity, and a district policy was not coded as inclusive just for protecting "sex," "identity," "gender presentation," or any other term.

GSA Presence. GSAs were coded as being present if the campus website listed a gender sexuality alliance on their website under the school's recognized student organizations list, as long as the club focused on LGBTQ+ students (such as those with a traditional name, i.e. Gay-Straight Alliance, or an alternative name, i.e. Peers for Pride).

Dropout rate. School-level annual dropout rate was calculated by dividing the number of dropouts in grades 9-12 during the 2017-2018 school year by the total number of students in grades 9-12 in attendance at any time during the school year.

Graduation rate. The four-year graduation rate was determined by the percentage who received their high school diploma in four years or fewer by August 31, 2018 for the 2018 cohort. This was calculated by dividing the number of students from the cohort who received a high school diploma by August 31, 2018 by the number of students in the 2018 cohort.

College-readiness score. The college readiness score was assigned by TEA to every campus based on several listed criteria to indicate the percentage of students at the campus deemed college-ready. Graduates must have met any of the criteria described by the agency. This included a graduate meeting the Texas Success Initiative (TSI) standards in both English Language Arts/mathematics through a TSI assessment (greater than or equal to 351 on Reading and 350 on Mathematics), SAT (greater than or equal to 480 on Evidence-Based Reading and Writing, and 530 on Mathematics), ACT (greater than or equal to 19 on English, 23 on Composite, and 19 on Mathematics), or successfully completing and earning credit for a college prep course. Additionally, a graduate could complete nine or more hours of dual course credits, met criteria on Advanced Placement/International Baccalaureate exams, earned an associate's degree, or completed an OnRamps course to be deemed college-ready by the agency.

College, career, or military-readiness. In addition to the graduates deemed college-ready, the agency also indicates the percentage of annual graduates who demonstrated college, career, or military readiness who met any of the aforementioned criteria, or any of the following as well. This included earning an industry-based certification, receiving an Individualized

Education Plan (IEP), enlisting in the armed forces, or receiving a Level 1 or Level 2 certificate in any workforce education among others.

Texas higher education enrollment. Texas higher education enrollment was indicated by the percentage of students who enrolled and began instruction at an institution of higher education in Texas for the school year following high school graduation. This was calculated by the number of graduates during the 2016-17 school year who attended a public or independent college or university in Texas in the 2017-18 academic year divided by the number of graduates during the 2016-17 school year. Students who enrolled in out-of-state colleges or universities or any non-public career school were not included, nor were students who attended Texas community colleges.

Covariates

The data for these covariates was collected by the Texas Education Agency for the 2016-2017 School Report Card, and expenditure information was specifically defined and found in the Public Education Information Management System financial reports.

Student population. The student population was determined by the number of students enrolled in the specific school.

Percentage of economically disadvantaged students. The percentage of economically disadvantaged students at a school was determined by dividing the number of students that are eligible for free or reduced-price lunch or other public assistance by the total number of students at the school.

Expenditure per student. Expenditure per student for each campus was calculated through dividing total expenditure of the school on operational and instructional costs by the student population.

Analysis Plan

Data were analyzed using STATA 14 (StataCorp, 2015). First, I performed basic descriptive statistics to determine the demographic makeup of the top 20 public school districts across Texas (Table 1). Next, I conducted bivariate correlations to examine associations between study variables. Then, I performed nested regression models to test the associations between SOGI-inclusive anti-discrimination policies and the presence of GSAs with educational attainment indicators such as the outcome variables described in Table 2. Nested regression models accounted for school policies measured at the district-level and educational outcome variables at the school level. I tested a few alternative models as sensitivity analyses, and report these in the final section of the results section. Covariates included the percentage of economically disadvantaged students at a school, school expenditure, and school population to better understand the impacts of the variables of interest. Finally, I tested the interaction between GSAs and inclusive policies as a predictor of the educational outcomes, including dropout rate, four-year graduation rate, college-readiness score, college, career, or military-readiness score, and enrollment in Texas higher education as covariates.

Results

Descriptive Analyses

Table 1 reports the descriptive statistics for the analytic sample. In the current sample, 49.74% of schools had gender sexuality alliances, 60.10% had sexual orientation and gender identity-inclusive district policies, and 59.59% had an inclusive district bullying policy. All districts had enumerated anti-discrimination and anti-harassment policies, as well as separate bullying policies. Out of the 20 analyzed school districts, seven districts protected both "sexual orientation" and "gender identity." Ten out of the 20 districts' bullying policies protected SOGI groups.

Table 2 outlines the means and standard deviations of the outcome variables. About half (49.69%) of graduates were deemed college-ready. Texas public schools in the largest 20 school districts had, on average, a 1.97% dropout rate and 90.45% four-year graduation rate. Nearly half (49.69%) of the graduating 2018 class were deemed college-ready, while 63.32% were deemed college, career, or military-ready by the TEA. About half (53.74%) of graduates were enrolled in Texas higher education.

Table 3 summarizes bivariate correlations between study variables. GSA presence was significantly associated with lower dropout rates, higher graduation rates, higher college-readiness scores and college, career, or military-readiness scores, and higher enrollment in Texas higher education. The presence of a GSA was also significantly associated with lower percentages of economically disadvantaged students at those schools. On the other hand, schools with enumerated inclusive policies had a higher dropout rate, lower graduation rate, lower college-readiness score, and lower Texas higher education enrollment. Schools with these

policies also had a significantly larger percentage of economically disadvantaged students, higher expenditure per student, and smaller school populations.

Inclusive bullying policy followed patterns similar to inclusive anti-discrimination policies, but with less significance. While the presence of a GSA and inclusive enumerated policies were not significantly associated, Table 3 indicates a strong correlation between the presence of a GSA and the absence of inclusive bullying policy.

Regression Analyses

Table 4 presents three models testing associations between SOGI-inclusive anti-discrimination policies, GSAs, and educational outcomes. Nested multiple linear regression models were conducted to determine if the study variables predicted dropout rate, four-year graduation rate, college readiness score, college, career, or military-readiness score, and enrollment in Texas higher education, controlling for the effects of the percentage of economically disadvantaged students, expenditure per student, and school population size.

Model 1: Inclusive Policy Predicting Educational Outcomes

A nested multiple linear regression was conducted to determine if the presence of inclusive policy was associated with the educational attainment outcomes of students when controlling for covariates. Results suggest that total variation in educational attainment outcomes was not significantly predicted by the presence of inclusive policy alone after accounting for covariates.

However, several covariates were significant in the model. For instance, the percentage of economically disadvantaged students and expenditure per student was significant for each outcome. Schools with a higher percentage of economically disadvantaged students had

significantly higher dropout rates (b=3.55, SE=.61, p<.001), lower graduation rates (b=-14.42, SE=2.39, p<.001), lower college-readiness scores (b=-58.06, SE=5.44, p<.001), lower college, career, or military-readiness scores (b=-36.47, SE=4.52, p<.001), and lower enrollment in Texas higher education (b=-21.27, SE=3.42, p<.001). Schools with higher expenditures per student had significantly higher dropout rates (b=.00006, SE=.00002, p<.05), lower graduation rates (b=-.0006, SE=.0002, p<.01), lower college-readiness scores (b=-.002, SE=.0004, p<.01), lower college, career, or military-readiness scores (b=-.002, SE=.0004, p<.001), and lower enrollment in Texas higher education (b=-.001, SE=.0003, p<.001). In addition, student population was a significant covariate when predicting for college-readiness score and college, career or military-readiness score. Schools with smaller student populations had significantly higher college-readiness scores (b=-0.001, SE=.0007, p<.001) and higher college, career, or military-readiness scores (b=-.003, SE=.001, p<.01).

This demonstrates that for each outcome, the percentage of economically disadvantaged students and expenditure per student varied significantly with each outcome, and SOGI-inclusive policy did not have a reportable effect on these outcomes beyond the effects of these covariates. For college-readiness and college, career, or military-readiness score specifically, SOGI-inclusive policy did not have a reportable effect on these outcomes beyond the effects of the percentage of economically disadvantaged students, expenditure per student, and student population.

Model 2: Inclusive Policy and GSAs Predicting Educational Outcomes

Another nested multiple linear regression was conducted to examine associations between both inclusive policies and the presence of GSAs with educational outcomes while controlling for the same covariates. Results again did not find that inclusive policies significantly

predicted educational attainment outcomes. However, schools with GSAs had significantly higher college-readiness scores (b=5.90, SE=2.93, p<.05) and marginally higher college, career, or military-readiness scores (b=4.24, SE=2.26, p=.06).

The percentage of economically disadvantaged students and expenditure per student were significant covariates for each model, while student population was significantly negatively associated with college-readiness score (b=-.006, SE=.002, p<.001) and college, career, or military-readiness score (b=-.004, SE=.001, p<.01). Following the trends of Model 1, higher percentages of economically disadvantaged students were associated with higher dropout rates (b=3.23, SE=.66, p<.001), lower graduation rates (b=-13.64, SE=2.53, p<.001), lower college readiness scores (b=-53.72, SE=5.80, p<.001), lower college, career, or military-readiness scores (b=-33.48, SE=4.79, p<.001), and lower enrollment in Texas higher education (b=-20.37, SE=3.65, p<.001). Additionally, larger expenditures per student were associated with higher dropout rates (b=.00006, SE=.00002, p<.05)., lower graduation rates (b=-.0006, SE=.0002, p<.01), lower college-readiness scores (b=-.002, SE=.0004, p<.001), lower college, career, or military-readiness scores (b=-.002, SE=.0004, p<.001), and lower enrollment in Texas higher education (b=-.001, SE=.0003, p<.001). These results demonstrate that, similar to Model 1, these covariates significantly predict long term educational attainment outcomes.

Model 3: Testing the Interaction between Inclusive Policy and GSAs for Predicting Educational Outcomes

Model 3 tested a two-way interaction between inclusive policy and GSAs as a predictor of educational outcomes. The two-way interaction effect was not significant for any outcome variable. This indicates the importance of GSAs for the associated outcome variables as demonstrated in Model 2, independent of the presence of inclusive policy.

The percentage of economically disadvantaged students and expenditure per student were significant covariates for each outcome following the trends in the previous two models, while student population was significantly associated with college-readiness score (b=-.006, SE=.002, p<.001) and college, career, or military-readiness score (b=-.004, SE=.001, p<.01).

Sensitivity Analyses

I ran a series of sensitivity analyses to examine whether results differed for anti-discrimination and anti-bullying policies. Sensitivity analyses suggested that results did not differ across these two predictors. Anti-bullying policies were thus not included in the final analysis. Additionally, results did not differ when the inclusive policy variable was split for policies that only protected sexual orientation or gender identity separately. This led to the final construction of the inclusive policy variable as a policy that protected both sexual orientation and gender identity together.

Discussion

This study aimed to assess the relations between SOGI-inclusive policies, GSAs, and long-term educational attainment outcomes. I hypothesized that a safe and supportive school climate represented through the institution of inclusive policies and GSAs—indicated by an association between SOGI-inclusive policies and higher graduation rates, lower dropout rates, and post-secondary attainment indicators—would promote student success not only on campus, but beyond their time in high school. I predicted that these positive outcomes would also be associated with GSAs, as supported by previous research, and that GSAs would amplify the effect of inclusive policies on educational attainment after high school, as they are more proximate in nature.

I did not find an interaction effect between GSAs and inclusive policies. However, schools with GSAs were significantly more likely to have higher college-readiness scores, and higher college, career, or military-readiness scores, even after accounting for covariates. Campus GSAs have an effect beyond the influence of economic disadvantage, expenditure, and student population on the college readiness outcomes measured. These results supported my hypothesis and prior research that associated campus GSAs with attendance rate, testing, and other positive outcomes (McEntee, 2019; Toomey et al, 2011).

Bivariate correlations also demonstrated that the presence of a GSA was significantly associated with lower percentages of economically disadvantaged students at those schools. This finding suggests that economically advantaged schools may have greater liberty to resource GSAs and their organizational activities. The presence of a GSA at the school wa salso significantly correlated with higher graduation rates, lower dropout rates, higher enrollment in Texas higher education, higher college-readiness scores, and higher college, career, or military-

readiness scores. These correlations elucidate a potential relationship between the resources available at the school to support students and educational outcomes. The fact that GSAs were more likely to be present in economically advantaged schools suggests that these schools may have more resources to support LGBT safe-school strategies. The presence of GSAs was also significantly correlated with the absence of inclusive bullying policy, which may suggest that policies may preliminarily indicate a larger problem within the district regarding bullying and discrimination that triggered the drafting of such policies.

While GSAs were associated with positive educational attainment indicators, inclusive policies were not significantly associated with any observed educational attainment outcomes. In fact, bivariate correlations showed that SOGI-inclusive policies were associated with negative indicators, such as lower graduation rate and higher dropout rate, which may indicate that these policies are more likely to be instituted at schools with existing problems. Schools with inclusive district policies were also more likely to be economically disadvantaged, which may indicate a lack of ability to implement those policies through campus practices such as GSA student organizations. District policies may be important insofar that they are implemented and fully practiced at a campus level. If district policies are to exist without its implementation of proximate campus strategies such as GSAs because of the lack of economic resources, these district policies may not be enough to translate to student educational attainment outcomes.

Campus GSAs have a proximate relationship with student outcomes and may not only provide a supportive environment for LGBT students, but also provide larger awareness of social inclusion for peer students and teachers, which could translate to higher educational outcomes for all students (Toomey et al., 2011). Meanwhile, district-level inclusive policies may not be

enough to influence student educational outcomes as they are a more distal strategy and, without proper implementation and investment, may not be felt at the student level on campus.

Limitations and Future Research

This study is not without limitations. The data was contingent upon the ability of school districts and campuses to update their websites with accurate information regarding their policies and student organizations. Even if a website did not list the policy or GSA, they may have been housing their policy under a different website or had not yet updated the website with student organizations. Additionally, just because a school lists a student organization, it does not necessarily demonstrate a full level of activity, whether the GSA has active membership, or whether the GSA is still being supported. Therefore, because I was not able to individually visit or contact schools and ensure all my information was correct, there may be some inevitable misinterpretation of school policies or listings. Additionally, the level of support at each school's GSA was not measured for this study, although prior research has demonstrated that the role a GSA plays at a school may make a significant difference (Poteat et al., 2017).

Policies were taken from the district level to better represent the social-ecological model, with district policies mirroring societal norms and pressures that may trickle down to the campus-level. These are the largest districts in Texas, representing about a third of all high school students in the state (McEntee, 2019). Thus, there are a lot of schools included in the sample that may choose to implement district-level policies differently. Future research may consider campus policies that are more linked to the school and their implementation beyond or restrictive of set district policies.

My research focused on the question of long-term well-being through educational attainment indicators, defined by a college-readiness score and college, career, or military-

readiness score assigned by the Texas Education Agency. While the TEA produces an annual Academic Performance Report, which is reputable and validated, my research relied on the accuracy of TEA data collection and score assignment. The college-readiness and college, career, or military-readiness score relied on the school's reports to the TEA of percentages of graduates meeting certain TEA criteria, as described previously, but schools may not know of all the graduating class' college-readiness undertakings. For instance, a graduate may have taken workforce training courses outside of school programming, which may not be accurately captured in TEA data. Additionally, the TEA variable of Texas higher education enrollment may not be the best indicator of educational attainment and continuation, as the variable did not capture graduates who attended schools outside of Texas or attended community college. Since graduates who attend school out of Texas or community college are still considered students who continue their education, this variable should be examined with that understanding.

Beyond the variables and data collection, this study focused on the top twenty school districts by population, which primarily includes urban and suburban school districts, and only 193 schools in the final analytic sample. Future research should include a larger sample of schools, examine campus-level policies, and utilize more educational attainment indicators to better understand the effect of GSAs and policies on student outcomes.

Summary and Implications

In the largest twenty school districts in Texas, GSA presence predicted higher college-readiness scores and higher college, career, or military-readiness scores. In contrast, inclusive policies were not associated with these outcomes but were highly correlated with school disadvantage. This may indicate that inclusive policies are more likely to be instituted at schools

with existing problems, rather than utilized as a preventative and protective measure. Policies may be important in their support of more proximate strategies such as campus GSAs.

The findings of this study have implications for school administrators, leadership, and faculty. The implication that GSAs may influence long-term well-being warrants investment of school resources in organizations that provide a supportive environment for LGBT students. Additionally, more research is needed to fully understand the impact of SOGI-inclusive non-discrimination policies. Future research on supportive strategies in Texas and other states will be critical to ensure the long-term well-being of LGBT students.

Figures

Table 1: Survey Sample School Information

	N	*M*
Number of Districts	20	
Number of Schools	193	
Student Population		2,043.76
Economically Disadvantaged Students[a]		58.39
Expenditure per Student[b]		13,478.55
GSAs Presence[a]	96	49.74
Inclusive SOGI Enumerated Policy[a]	116	60.10
Bullying Policy Inclusive of SOGI Groups[a]	115	59.59

[a]Percentage of schools in district. [b]Dollars.

Table 2: Mean of Outcome Variables of the Class of 2018

	M	*SD*
Dropout Rate	1.97%	2.03
Four-Year Graduation Rate	90.45%	8.67
College-Readiness Score	49.69%	23.38
College, Career, or Military-Readiness Score	63.32%	17.04
Enrollment in Texas Higher Education	53.74%	12.87

Table 3: Bivariate Correlations Among Study Variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11
1. Dropout Rate	—										
2. Four-Year Graduation Rate	-0.91***	—									
3. College-Readiness Score	-0.67***	0.74***	—								
4. College, Career, or Military-Readiness Score	-0.66***	0.72***	0.95***	—							
5. Enrollment in Texas Higher Education	-0.66***	0.68***	0.74***	0.71***	—						
6. % of Economically Disadvantaged Students	0.50***	-0.55***	-0.63***	-0.55***	-0.53***	—					
7. Expenditure per Student	0.33***	-0.33***	-0.35***	-0.41***	-0.46***	0.39***	—				
8. School Population Size	-0.29***	0.27***	0.12	0.15*	0.28***	-0.43***	-0.55***	—			
9. Inclusive SOGI Enumerated Policy[a]	0.27***	-0.34***	-0.20**	-0.16*	-0.31***	0.52***	0.25***	-0.52***	—		

10. Presence of GSA[a]	-0.29***	0.28***	0.36***	0.34***	0.30***	-0.43***	-0.38***	0.36***	-0.10	—	
11. Inclusive Bullying Policy[a]	0.19**	-0.20**	-0.14	-0.10	-0.26***	0.41***	0.17*	-0.35***	0.47***	-0.16*	—

Note: N=193. ***$p < 0.001$, **$p<0.01$, *$p<0.05$.
[a]Inclusive SOGI enumerated policy, presence of GSA, and inclusive bullying policy are binary variables.

Table 4: Educational Outcomes by Inclusive Policy and GSA Presence

	Model 1		Model 2		Model 3	
	B	*SE*	*B*	*SE*	*B*	*SE*
Dropout Rate						
Inclusive Policy	-.16	.39	-.06	0.40	-.02	.48
GSA			-.38	.31	-.34	.42
Inclusive x GSA					-.09	.54
Graduation Rate						
Inclusive Policy	-1.22	1.65	-1.49	1.69	-1.95	1.95
GSA			1.06	1.17	.55	1.59
Inclusive x GSA					.98	2.03
College-Readiness						
Inclusive Policy	4.34	3.14	2.73	3.23	1.41	3.96
GSA			**5.90***	2.93	4.37	3.94
Inclusive x GSA					2.87	5.00
College, Career, Military-Readiness						
Inclusive Policy	3.72	2.94	2.62	3.01	3.02	3.54
GSA			**4.24**$^{+}$	2.26	4.68	3.07
Inclusive x GSA					-.83	3.93

Texas Higher Education Enrollment						
Inclusive Policy	-1.45	2.12	-1.78	2.18	-1.11	2.58
GSA			1.29	1.75	2.07	2.37
Inclusive x GSA					-1.50	3.02

Note. ***$p < .001$; **$p < .01$; *$p < .05$. Outcomes are bolded. Coefficients are adjusted. Covariates included percentage of students that were economically disadvantaged, expenditure per student, and student population at each campus.

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